In re Application of:

Aizawa et al.

Serial No.: 09/830.019

Filed: September 21, 2001

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## Amendments to the Claims:

Please amend claims 1-3 and 7 as follows.

This listing of claims will replace all prior versions, and listings, of claims in the application:

PATENT

Attorney Docket No. SHIM1120

## **Listing of Claims:**

- 1. (Currently Amended) An adjuvant comprising a purified and attenuated toxin (i) having a residual toxic activity of less than one-two thousandth (<1/2000) that of the natural toxin corresponding thereto and (ii) having an activity of enhancing production of an antibody specific to an antigen other than the attenuated toxin, wherein said purified and attenuated toxin retains serine residues, glutamic acid residues, except that and lysine residues of the natural toxin in its amino acid sequence, except that a formalin molecule is bound to the lysine residues of the attenuated toxin, and wherein said toxin is selected from the group consisting of cholera toxin, pertussis toxin, heat-labile toxin of pathogenic E. coli, Staphylococcus  $\alpha$  toxin and  $\beta$  toxin, and thermostable hemolytic toxin of Vibrio parahaemolyticus.
- 2. (Currently Amended) The adjuvant of claim 1, wherein said purified and attenuated toxin is a mutant having an amino acid sequence of the corresponding natural toxin wherein one or more amino acid residues are substituted, inserted, deleted, and/or added, and having an adjuvant activity, so long as the mutant retains serine residues, glutamic acid residues, and lysine residues of the natural toxin, except that a formalin molecule is bound to the lysine residues of the attenuated toxin.
- 3. (Currently Amended) The adjuvant of claim 1, wherein said purified and attenuated toxin is a natural toxin retains the amino acid sequence of the natural toxin, except that a formalin molecule is bound to the lysine residues of the attenuated toxin.

Claims 4-6 (Canceled)

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7. (Currently Amended) The adjuvant of claim [[6]]  $\underline{1}$ , wherein said residual toxic activity is less than one-ten thousandth (1/10,000) that of said corresponding natural toxin.

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Claims 8-15 (Canceled)